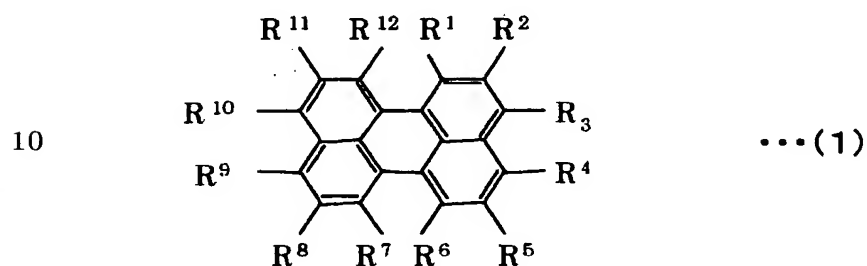
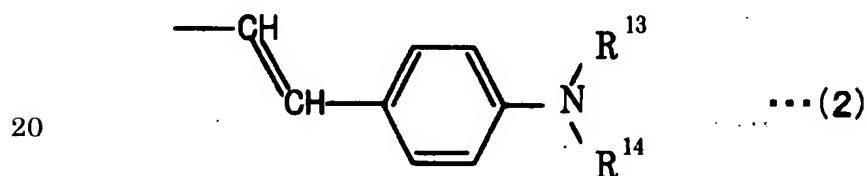


WHAT IS CLAIMED IS:

1. A fluorescent material comprising either one or both of a perylene compound represented by formula (1) below and an anthanthrene compound represented by formula (101) below:

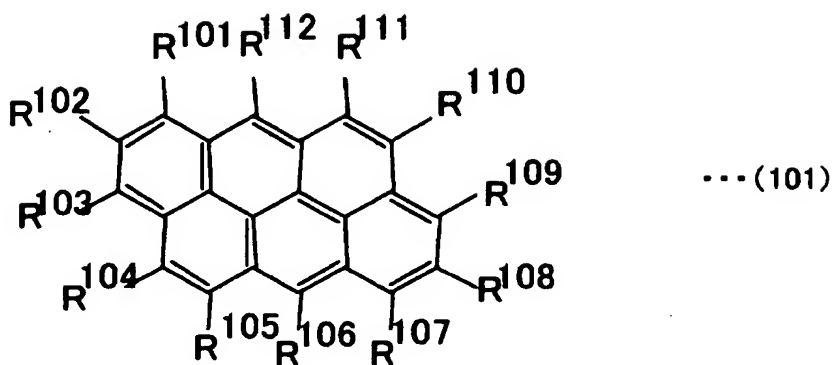


(in formula (1), two or more of R^{1-12} , each, have a structure represented by formula (2) below, with the rest being hydrogen),



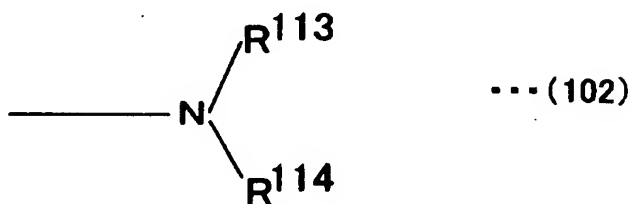
(in formula (2), R^{13} and R^{14} are, independently from each other, an aromatic group that may be substituted, or an aliphatic group that may be substituted, wherein R^{13} and R^{14} may be bonded with each other, directly or via a bonding group), and

5



10 (in formula (101), four or more of $R^{101-112}$, each, have a structure represented by formula (102) below, with the rest being hydrogen),

15



20 (in formula (102), R^{113} and R^{114} are, independently from each other, an aromatic group that may be substituted, or an aliphatic group that may be substituted, wherein R^{113} and R^{114} may be bonded with each other, directly or via a bonding group).

25 2. A fluorescent material according to claim 1, wherein two of said R^{1-12} has a structure represented by formula (2), with the rest being hydrogen.

3. A fluorescent material according to claim 2,
wherein four of said $R^{101-112}$, each, have a structure
represented by formula (102), with the rest being
5 hydrogen.

4. A fluorescent material according claim 3,
wherein said R^{13} and R^{14} are, independently from each
other, a phenyl or naphthyl group that may be
10 substituted.

5. A fluorescent material according to claim 4,
wherein said phenyl group or naphthyl group has a
substituent group selected from the class consisting of
15 an alkyl group, an aryl group, an alkoxy group, an
aryloxy group, a dialkylamino group and a diarylamino
group, and the substituent group may also be
substituted.

20 6. A fluorescent material according to claim 4,
wherein said R^{113} and R^{114} are, independently from each
other, a phenyl or naphthyl group that may be
substituted.

25 7. A fluorescent material according to claim 6,
wherein said phenyl group or naphthyl group has a
substituent group selected from the class consisting of

an alkyl group, an aryl group, an alkoxy group, an aryloxy group, a dialkylamino group and a diarylamino group, and the substituent group may also be substituted.

5

8. A fluorescent material according to claim 6 for use as an organic light-emitting layer forming material for an organic electroluminescent element.

10

9. A fluorescent material according to claim 8 for use as an organic light-emitting layer forming material in the capacity of a host or a guest for an organic electroluminescent element.

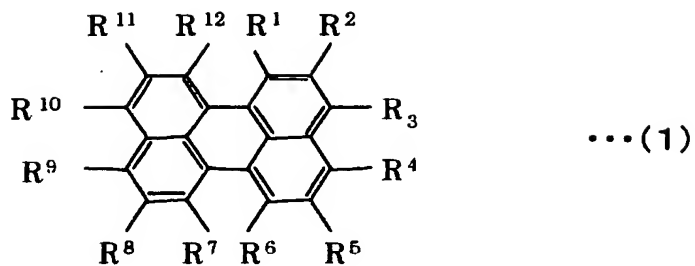
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10. An organic electroluminescent element having an organic light-emitting layer between an anode and a cathode, said organic light-emitting layer comprising a fluorescent material according to one of claims 1 to 7.

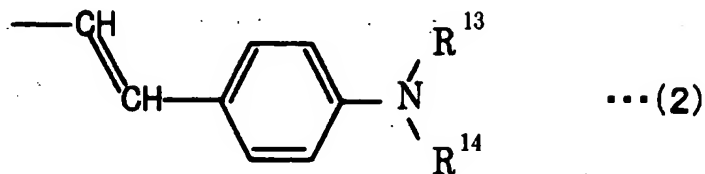
20

11. An organic electroluminescent element having an organic light-emitting layer between an anode and a cathode, said organic light-emitting layer using a perylene compound represented by formula (1) below as a fluorescent material:

25



(in formula (1), two of R^{1-12} , each, have a structure represented by formula (2) below, with the rest being hydrogen),



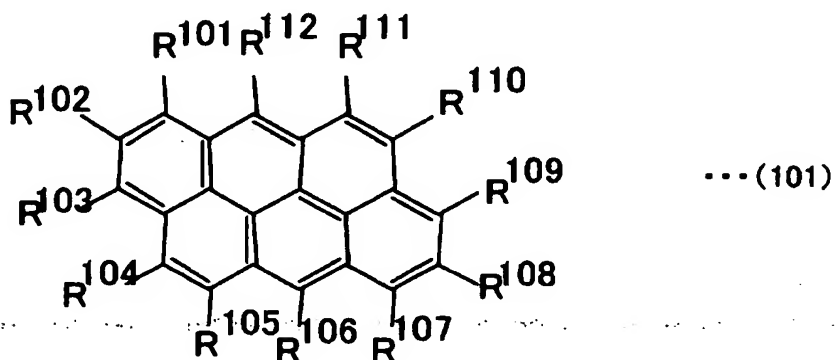
15

(in formula (2), R^{13} and R^{14} are, independently from each other, an aromatic group that may be substituted, or an aliphatic group that may be substituted, wherein R^{13} and R^{14} may be bonded with each other, directly or via a bonding group).

12. An organic electroluminescent element according to claim 11, wherein said R^{13} and R^{14} are, independently from each other, a phenyl or naphthyl group that may be substituted.

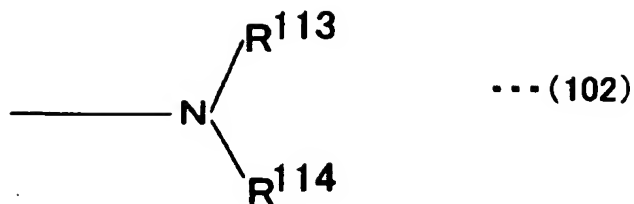
13. An organic electroluminescent element according to claim 12, wherein, said phenyl group or naphthyl group has a substituent group selected from the class consisting of an alkyl group, an aryl group, an alkoxy group, an aryloxy group, a dialkylamino group and a diarylamino group, and the substituent group may also be substituted.

14. An organic electroluminescent element having an organic light-emitting layer between an anode and a cathode, said organic light-emitting layer using an anthanthrene compound represented by formula (101) below as a fluorescent material:



20 (in formula (101), four of $R^{101-112}$, each, have a structure represented by formula (102) below, with the rest being hydrogen),

25



5

(in formula (102), R^{113} and R^{114} are, independently from each other, an aromatic group that may be substituted, or an aliphatic group that may be substituted, wherein R^{113} and R^{114} may be bonded with each other, directly or
10 via a bonding group).

15. An organic electroluminescent element according to claim 14, wherein said R^{113} and R^{114} are, independently from each other, a phenyl or naphthyl
15 group that may be substituted.

16. An organic electroluminescent element according to claim 15, wherein said phenyl group or naphthyl group has a substituent group selected from
20 the class consisting of an alkyl group, an aryl group, an alkoxy group, an aryloxy group, a dialkylamino group and a diarylamino group, and the substituent group may also be substituted.

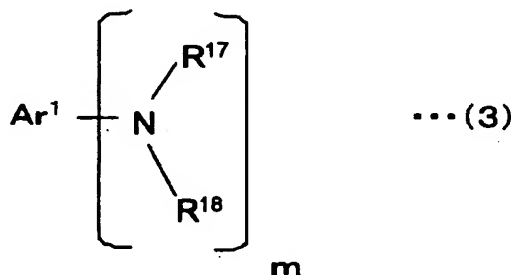
25 17. An organic electroluminescent element according to claim 10, wherein said fluorescent material is an organic light-emitting layer forming

material in the capacity of a host or a guest.

18. An organic electroluminescent element according to one of claims 11 to 16, wherein said
5 fluorescent material is an organic light-emitting layer forming material in the capacity of a host or a guest.

19. An organic electroluminescent element according to claim 10, wherein said organic light-
10 emitting layer comprises a mixture of said fluorescent material and an aromatic amine compound represented by formula (3) below as an organic light-emitting layer forming material:

15

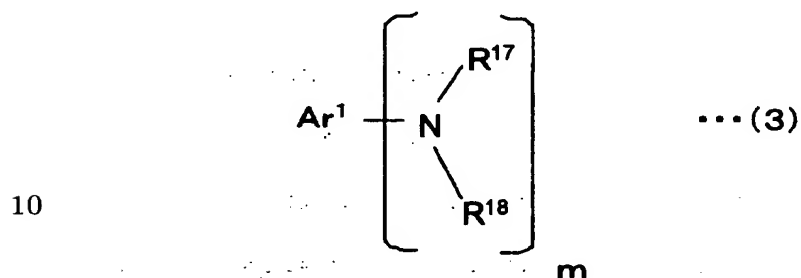


20

(wherein Ar¹ is an aromatic group with a bonding valency of 2, 3 or 4 that may be substituted; R¹⁷ and R¹⁸ are, independently from each other, a monovalent aromatic group that may be substituted; and m is an
25 integer of 2-4).

20. An organic electroluminescent element

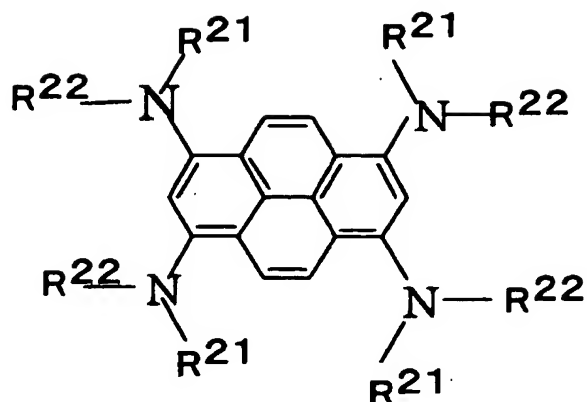
according to one of claims 11 to 17, wherein said organic light-emitting layer comprises a mixture of said fluorescent material and an aromatic amine compound represented by formula (3) below as an organic light-emitting layer forming material:



(wherein Ar¹ is an aromatic group with a bonding valency of 2, 3 or 4 that may be substituted; R¹⁷ and R¹⁸ are, independently from each other, a monovalent aromatic group that may be substituted; and m is an integer of 2-4).

21. An organic electroluminescent element according to claim 19, wherein said aromatic amine compound represented by formula (3) is a tetra(diarylamino)-substituted pyrene represented by formula (4) below:

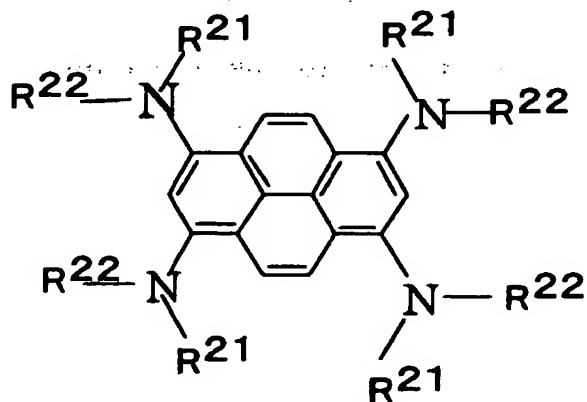
25



... (4)

10 (wherein R²¹ and R²² are, independently from each other, a monovalent aromatic group).

22. An organic electroluminescent element according to claim 20, wherein said aromatic amine compound represented by formula (3) is a
 15 tetra(diarylamino)-substituted pyrene represented by formula (4) below:



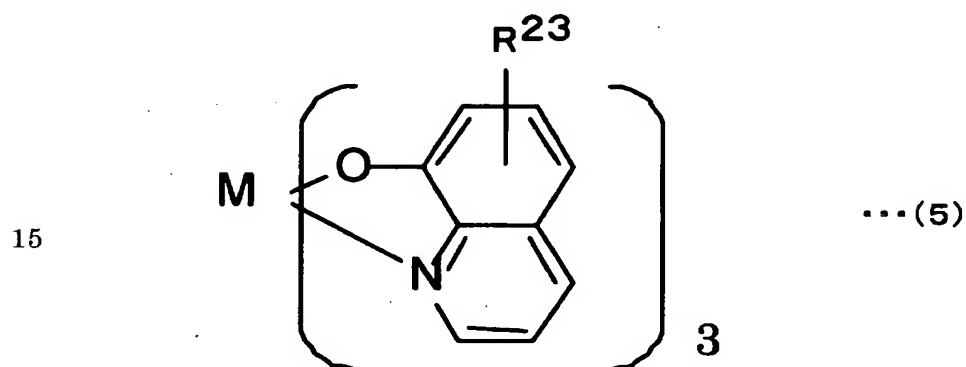
... (4)

25

(wherein R^{21} and R^{22} are, independently from each other, a monovalent aromatic group).

23. An organic electroluminescent element
5 according to claim 10, wherein said organic light-emitting layer comprises, as an organic light-emitting layer forming material, a mixture of said fluorescent material and a hydroxyquinoline complex represented by formula (5) below:

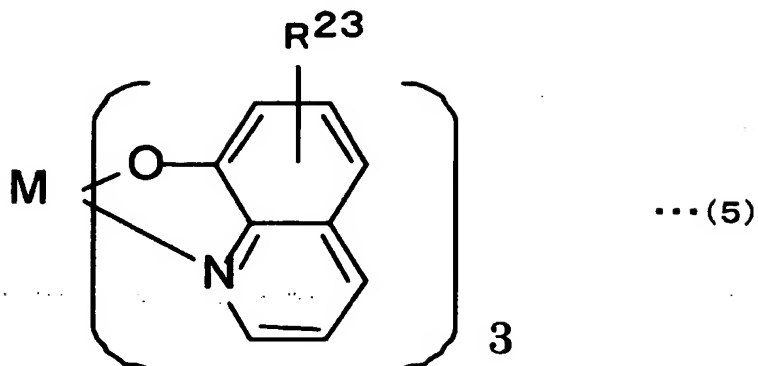
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20 (wherein R^{23} is hydrogen or an alkyl group that may be substituted; and M is a metal having a valency of 3).

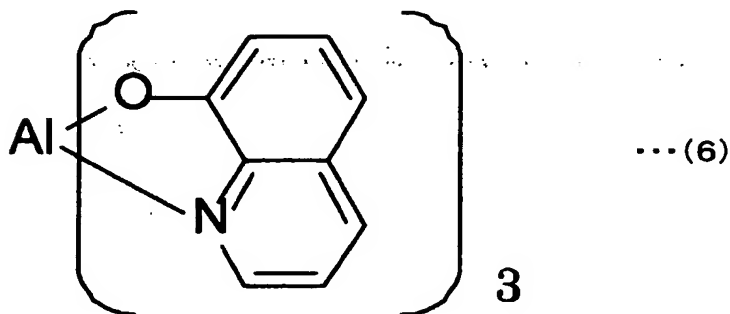
24. An organic electroluminescent element
according to one of claims 11-17, wherein said organic
25 light-emitting layer comprises, as an organic light-emitting layer forming material, a mixture of said fluorescent material and a hydroxyquinoline complex

represented by formula (5) below:



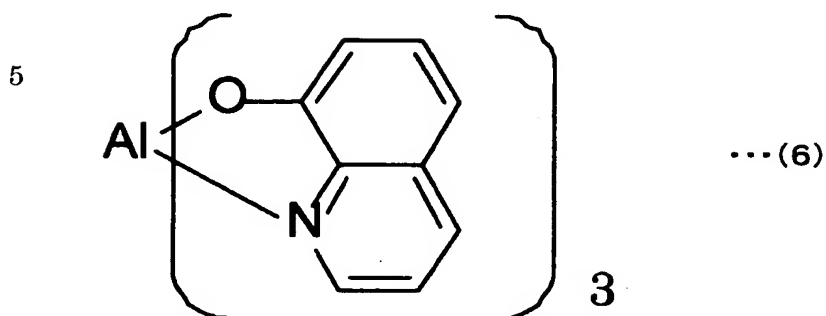
(wherein R^{23} is hydrogen or an alkyl group that may be substituted; and M is a metal having a valency of 3).

- 15 25. An organic electroluminescent element according to claim 23, wherein said hydroxyquinoline complex is an aluminum hydroxyquinoline complex represented by formula (6) below:



26. An organic electroluminescent element according to claim 24, wherein said hydroxyquinoline

complex is an aluminum hydroxyquinoline complex represented by formula (6) below:



10

27. An organic electroluminescent element according to claim 10, wherein said organic light-emitting layer consists of a single layer of a fluorescent material.

15

28. An organic electroluminescent element according to one of claims 11 to 16, wherein said organic light-emitting layer consists of a single layer of a fluorescent material.

20

29. An organic electroluminescent display using an organic electroluminescent element according to claim 10.

25

30. An organic electroluminescent display using an organic electroluminescent element according to one of claims 11 to 17, 19, 21, 23, 25 and 27.

31. An organic electroluminescent display using
an organic electroluminescent element according to
claim 18.

5

32. An organic electroluminescent display using
an organic electroluminescent element according to
claim 20.

10 33. An organic electroluminescent display using
an organic electroluminescent element according to
claim 22.

15 34. An organic electroluminescent display using
an organic electroluminescent element according to
claim 24.

20 35. An organic electroluminescent display using
an organic electroluminescent element according to
claim 26.

25 36. An organic electroluminescent display using
an organic electroluminescent element according to
claim 28.